

**WHAT IS CLAIMED IS:**

1           1.       A display device with a power interruption delay function, comprising:  
2               a pulse width modulation controller for generating a pulse width modulation signal under the  
3 control of a microcomputer;  
4               a current amplifier for amplifying current in response to the pulse width modulation signal  
5 from said pulse width modulation controller;  
6               a horizontal/vertical processor for generating a square wave pulse signal under the control  
7 of said microcomputer;  
8               a horizontal driver for generating a drive pulse signal in response to the square wave pulse  
9 signal from said horizontal/vertical processor;  
10              a horizontal deflection coil for horizontally deflecting electron beams generated in said  
11 display device;  
12              a S-correction capacitor connected in series between said horizontal deflection coil and a  
13 ground terminal, for correcting a linearity of center-to-left and right sides of a screen;  
14              a horizontal output circuit for charging and discharging energy on said horizontal deflection  
15 coil and said S-correction capacitor in response to an output signal from said current amplifier and  
16 said drive pulse signal from said horizontal driver;  
17              a horizontal/vertical processor constant voltage circuit for supplying a constant voltage to  
18 said horizontal/vertical processor in response to an input voltage; and  
19              power interruption delay charging means for gradually lowering said input voltage to said  
20 horizontal/vertical processor constant voltage circuit when power supplied to said display device is  
21 interrupted.

1           2.     The display device as set forth in claim 1, wherein said power interruption delay  
2 charging means includes:

3           a polarity capacitor for performing a charging operation when power is supplied to said  
4 display device and a discharging operation when the power supplied to said display device is  
5 interrupted; and

6           a diode connected to said polarity capacitor, for preventing a voltage charged on said polarity  
7 capacitor from being discharged to a power supply circuit when the power supplied to the display  
8 device is interrupted.

1           3.     A display device with a power interruption delay function, comprising:  
2           a power supply circuit for converting a received commercial alternating current power into  
3 a direct current input voltage;

4           a horizontal deflection circuit under the control of a microcomputer, receiving said direct  
5 current input voltage, for horizontally deflecting electron beams generated in said display device;  
6 and

7           power interruption delay charging means for gradually lowering said direct current input  
8 voltage received by said horizontal deflection circuit when said alternating current power supplied  
9 to said power supply circuit is interrupted, said power interruption delay charging means comprising:

10           a polarity capacitor for performing a charging operation when said alternating  
11 current power is supplied and a discharging operation when said alternating current  
12 power is interrupted; and

13           a diode connected to said polarity capacitor, for preventing a voltage charged  
14 on said polarity capacitor from being discharged to said power supply circuit when  
15 said alternating current power is interrupted.

1           4.     The display device as set forth in claim 3, wherein said horizontal deflection circuit  
2 comprises:

3                 a pulse width modulation controller for generating a pulse width modulation signal under the  
4 control of said microcomputer;

5                 a current amplifier for amplifying current in response to said pulse width modulation signal  
6 generated by said pulse width modulation controller;

7                 a horizontal/vertical processor for generating a square wave pulse signal under the control  
8 of said microcomputer;

9                 a horizontal driver for generating a drive pulse signal in response to the square wave pulse  
10 signal from said horizontal/vertical processor;

11                 a horizontal deflection coil for horizontally deflecting said electron beams;

12                 a S-correction capacitor connected in series between said horizontal deflection coil and a  
13 ground terminal, for correcting a linearity of center-to-left and right sides of a screen;

14                 a horizontal output circuit for charging and discharging energy on said horizontal deflection  
15 coil and said S-correction capacitor in response to an output signal from said current amplifier and  
16 said drive pulse signal from said horizontal driver; and

17                 a horizontal/vertical processor constant voltage circuit for supplying a constant voltage to  
18 said horizontal/vertical processor in response to said direct current input voltage, said direct current  
19 input voltage being received through said power interruption delay charging means.

1           5.     The display device as set forth in claim 4, wherein said current amplifier comprises:

2                 a current amplification transformer having a primary coil and a secondary coil;

3 a field effect transistor having its gate terminal connected to one terminal of said secondary  
4 coil;

5 one terminal of said primary coil being connected to an output terminal of said pulse width  
6 modulation controller through a capacitor and another terminal of said primary coil being connected  
7 to said ground terminal;

8 said field effect transistor having a drain terminal connected to a high voltage source and a  
9 source terminal connected in common to a second terminal of said secondary coil and one side of  
10 a pulse transformer;

11 said pulse transformer having a second side connected to one side of said horizontal  
12 deflection coil;

13 a first diode connected between said source terminal and said drain terminal; and

14 a second diode connected between said second terminal of said secondary coil and said  
15 ground terminal.

1 6. The display device as set forth in claim 5, wherein said horizontal output circuit  
2 comprises a horizontal output transistor having a collector terminal connected in common to said  
3 second side of said pulse transformer and said one side of said horizontal deflection coil, an emitter  
4 terminal connected to said S-correction capacitor and said ground terminal, and a base terminal  
5 connected to an output terminal of said horizontal driver for receiving said drive pulse signal.

1 7. The display device as set forth in claim 6, wherein said horizontal driver comprises:  
2 a second field effect transistor having a gate terminal connected to receive said square wave  
3 pulse signal from said horizontal/vertical processor, a source terminal connected to said ground  
4 terminal, and a drain terminal;



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